

DAVID BRYANT LOWRY

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Education

- 2004 - 2010 PhD Duke University. Program in Genetics and Genomics
 Advisor: Dr. John Willis
- 1997 - 2001 B.S. University of California, Berkeley. Genetics and Plant Biology
 High Honors

Publications

Hall M. C., **D. B. Lowry**, J. H. Willis. (2010) Multiple independent genetic loci control local adaptation in wild populations of *Mimulus guttatus*. *Molecular Ecology* *In press*

Lowry, D. B. (2010) Landscape evolutionary genomics. *Biology Letters*. *In press*

Wu, C. A., **D. B. Lowry**, L. I. Nutter, J. H. Willis. (2010) Natural variation for drought response in the *Mimulus guttatus* species complex. *Oecologia* 162: 23-33

Lowry, D. B., M. C. Hall, D. E. Salt, J. H. Willis. (2009) Genetic and physiological basis of adaptive salt tolerance divergence between coastal and inland *Mimulus guttatus*. *New Phytologist* 183: 776-788. (Special issue on plant adaptation)

Lowry, D. B., J. L. Modliszewski, K. M. Wright, C. A. Wu, J. H. Willis. (2008). The strength and genetic basis of reproductive isolating barriers in flowering plants. *Philosophical Transactions of the Royal Society B* 363: 3009-3021. (Cover photo)

Lowry, D. B., R. C. Rockwood, J. H. Willis. (2008). Ecological reproductive isolation of coast and inland races of *Mimulus guttatus*. *Evolution* 62: 2196-2214. (Cover photo)

Wu, C. A., **D. B. Lowry**, A. M. Cooley, K. M. Wright, Y. W. Lee, and J. H. Willis. (2008). *Mimulus* is an emerging model system for the integration of ecological and genomic studies. *Heredity* 100: 220-230.

Grants and Awards

- 2007-2010 NSF Environmental Genomics Grant (EF-0723814): “Ecological genomics drought adaptation in *Mimulus*.” Conceived and conducted research that formed the proposal, and co-wrote grant. PhD advisor John Willis listed as PI. \$866,802.
- 2007-2009 NSF Doctoral Dissertation Improvement Grant (DEB-0710094). \$11,943.

2007	Best student talk, Duke University Program in Genetics and Genomics retreat
2006	NSF Graduate Student Fellowship (Honorable Mention)
2005	Duke University International Travel Grant. \$2500.
2004-2006	NIH Graduate Fellowship in Genetics at Duke University
2001	Phi Beta Kappa Honor Society, UC Berkeley
2000	Howard Hughes Undergraduate Fellowship. \$4000.
2000	Sigma Xi Grant-in-Aid. \$900.
1999	NSF Research experience for undergraduates

Additional Research Experience

2005	Rotation Student Duke University	Primate cis-regulatory element evolution.
2004	Rotation Student Duke University	Plant developmental biology.
2004	Field Assistant University of Montana	Food web ecology.
2004	Field Assistant. Cornell University	Tropical stream/fish ecology in Venezuela.
2002-2003	Field Assistant Princeton University	Landscape ecology of bees.
2002	Postgraduate Researcher UC Davis	Invasive plant genetics.
2002	Postgraduate Researcher UC Davis.	Plant nitrogen fixation ecology.
1998-2001	Lab/Field Assistant. UC Berkeley	Plant ecology

Presentations

Invited talks:

2009	“The Origin of Species 150 years after Darwin” symposium, Japanese Society for Evolutionary Studies. Sapporo, Japan. “A chromosomal inversion is responsible for ecological reproductive isolation between annual and perennial races of the yellow monkeyflower, <i>Mimulus guttatus</i> .”
2009	University of Virginia EEBio Seminar. Charlottesville, VA. “Deconstructing local adaptation: General challenges, progress in <i>Mimulus</i> , and the future.”
2009	University of California, Berkeley Ecolunch Seminar. Berkeley, CA. “Deconstructing local adaptation: General challenges, progress in monkeyflower, and the future.”
2009	University of Southern California. Los Angeles, CA. “Deconstructing

- local adaptation: General challenges, progress in *Mimulus*, and the future.”
- 2007 Ecological Genomics Symposium. Kansas City, MO. “An ecological genomic analysis of species formation in the yellow monkeyflower, *Mimulus guttatus*.” *Poster abstract selected for oral presentation.
- Contributed talks and posters:*
- 2010 Plant and Animal Genomes, San Diego, CA. “Genome-wide deconstruction of local adaptation between ecological races of the yellow monkeyflower, *Mimulus guttatus*.”
- 2009 Ecological & Evolutionary Functional Genomics. Gordon Conference. Tilton, NH. “The genetic and ecological mechanisms of local adaptation in the yellow monkeyflower, *Mimulus guttatus*.”
- 2008 International Evolution Society Conference. Minneapolis, MN. “Ecological and genetic mechanism of reproductive isolation in *Mimulus guttatus*.”
- 2007 Joint Conference of Botany and Plant Biology. Chicago, IL. “Genetic and ecological mechanisms of incipient speciation through geographic race formation in *Mimulus guttatus*.”
- 2007 Annual *Mimulus* meeting. Durham, NC. “Genetics of adaptation and reproductive isolation between coastal and inland *Mimulus guttatus*.”
- 2007 Duke University Program in Genetics and Genomics Retreat. Nags Head, NC. “Genetic and ecogeographic mechanisms of species formation in *Mimulus guttatus*.”
- 2006 Genetics of Speciation Conference. Vancouver, BC, Canada. “Adaptive divergence and ecological reproductive isolation among two ecomorphs at a large geographic scale.”
- 2006 International Evolution Society Conference. Stony Brook, NY. “Landscapes, divergent adaptations, and the genetics of ecological reproductive isolation in the yellow monkeyflower (*Mimulus guttatus*).”

Teaching and Mentoring Experience

Teaching Assistantships

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| 2008 | Comparative Vertebrate Anatomy.
Instructor: Dr. Kathleen Smith | Duke University |
| 2007 | AIDs and Emerging Diseases in Africa.
Instructor: Dr. Sherryl Broverman | Duke University |
| 2006 | Comparative Vertebrate Anatomy.
Instructor: Dr. Kathleen Smith | Duke University |
| 1999-2000 | Biology 1B Field Ecology Section.
Instructor: Dr. Mike Moser | UC Berkeley |

Invited Guest Lectures

2010	Graduate Ecology and Evolution	North Carolina State University
	Instructor: Dr. Marc Johnson	

Mentoring Programs

2009	Howard Hughes Medical Institute summer undergraduate mentorship
2008	Howard Hughes Medical Institute summer precollege mentorship
2007	Summer Research Opportunities Program (SROP) for minority undergraduates

Undergraduate Students Mentored

2009-2010	Por Tangwanchaoen	Duke University
2008-2009	Zhirui Zhu	Duke University
2007-2010	Calvin Sheng	Duke University
2007-2009	Laura Nutter	Duke University
2007	Mike Yan	Duke University
2007	Porsha Andrews	Winston Salem University

High School Students Mentored

2008	Nettie McMiller	C. E. Jordan High School, Durham, NC
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Service and Outreach

2008-2010	Reviewer: The American Naturalist, Evolution, Heredity, New Phytologist, and Molecular Ecology
2008	Collaborator: Building Opportunities and Overtures in Science and Technology, a program for introducing middle school students to science in Durham, NC.
2007	Speaker: Outreach Presentations to Northwest High School, Lenexa, KS
2007-2008	Czar: Duke Population Biology Seminar Series
2005-2009	Education Collaborator: Provided plant material for Bio. 26 at Duke University
2005-2009	Organizer: <i>Mimulus</i> seed collection center
2006-2009	Web Host: <i>Mimulus</i> Community Wiki page
2005-2006	Steerer: Duke Biology Department Steering Committee
2005-2006	Organizer: Duke Graduate Student Symposium
2004-2005	Representative: Duke Graduate and Professional Student Council

References

Dr. John Willis	Duke University	jwillis@duke.edu
Dr. Mark Rausher	Duke University	mrausher@duke.edu
Dr. Mohamed Noor	Duke University	noor@duke.edu